Section 1

What Is COP?

The Common Operational Picture (COP) is a software application for the Global Command and Control System (GCCS) on the Unified Build (UB) platform. The COP allows the near real-time exchange of track data between participating nodes on a wide area network (WAN) and/or a local area network (LAN). The COP exchanges the following types of data:

- Tracks:
  - -- Platform
  - -- ELINT
  - -- Acoustic
  - -- J-Units
  - -- Missile
  - -- Link
- Update messages
- SITREP messages
- Drop-track messages

SITREP messages are intended to bring the local track picture up to date with other participants on the WAN/LAN. However, participating nodes do not send ambiguity tracks, local tracks, or terminal tracks to other participating nodes. When necessary, the COP sends deletions of track data via drop-track messages.

This section provides an overview of the COP architecture and a list of critical usage notes and cautions. Section2 of this document explains how to install the COP software, and Section3 explains how to use it.

Architectural Overview

How does the COP exchange data on a WAN/LAN? The answer is best represented by an inverted tree diagram, in which the child of one node may itself be the parent of another node. A parent or master node provides track data to its child nodes. Likewise, child nodes may also provide track data to their parent node, which then transmits that data to the other

participating nodes. shows the data flow of a single track update from a child node to the other participating nodes on the WAN/LAN.

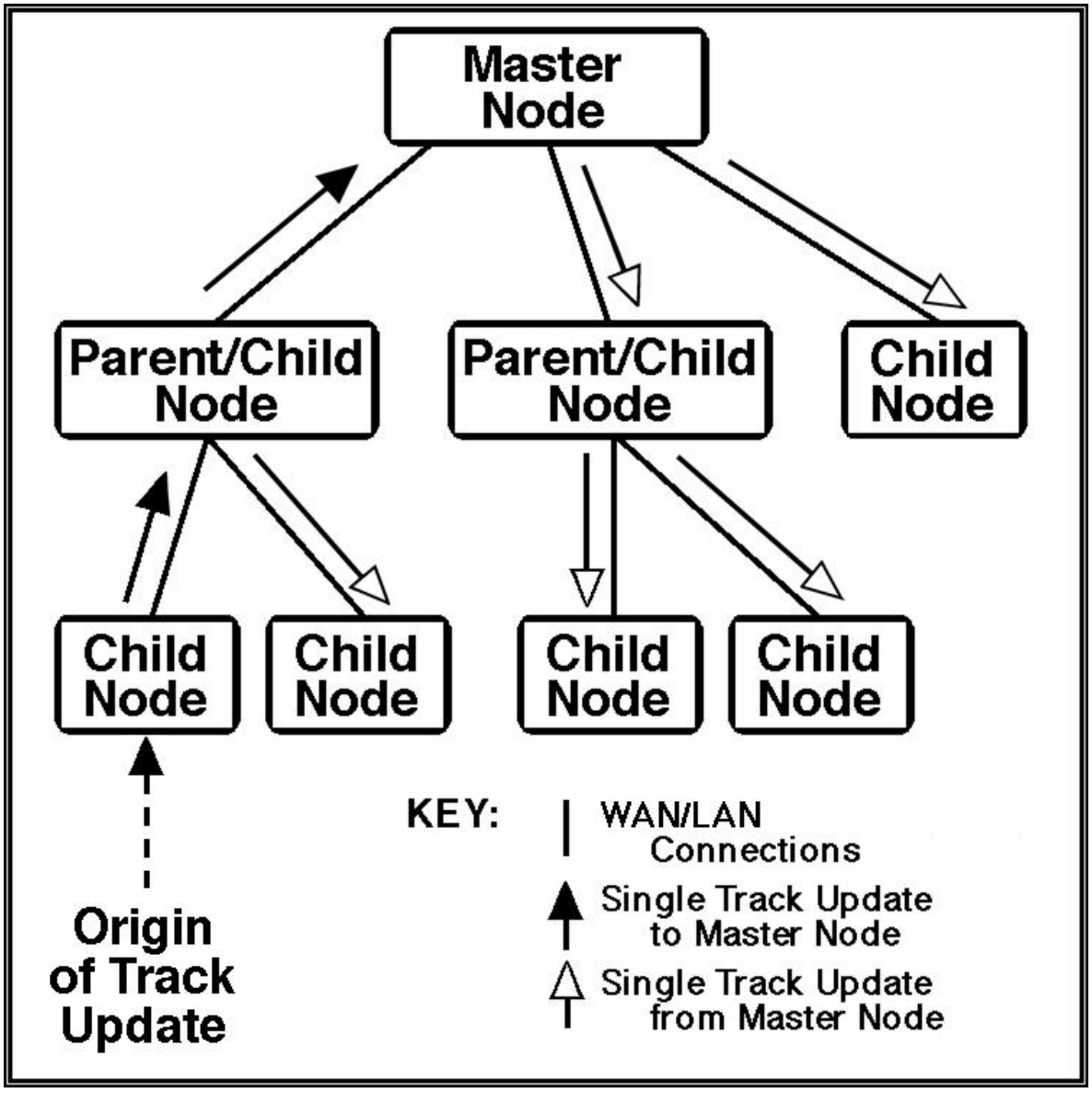

Figure 1-1 COP Data Flow

As indicated in , each child node can transmit a track update to one parent node only. In contrast, a master node or parent node can transmit a track update to multiple child nodes. Any master or parent node may provide track data to a maximum of five child nodes.

Participating nodes may also receive track data through other means such as radar inputs, link-11 data feeds, and satellites, and then share this track data with other participating nodes.

The COP can also handle low-bandwidth network connections. Thus, a participating node that does not have a high data-rate network connection can still receive track data reliably, although the frequency and number of updates are reduced due to the low-bandwidth connection.

Upon the COP start-up and on the hour and half-hour, child nodes automatically receive the most current track data via SITREP messages from their parent. These messages are intended to bring the child node up to date with the current COP track picture held by the other participating nodes.

Critical Usage Notes and Cautions

1. **NOTE:** Track associations and disassociations may not be propagated to the other participating nodes in the COP until the next update occurs on the affected tracks.

2. **CAUTION:** In order to maintain a truly common operational picture among all participating nodes in the COP:

    a) All participating nodes must maintain the same track allocations within their local track databases. (These allocations are set by the local GCCS System Administrator using the Track Database Reconfig option on the Database menu.) If track allocations differ among the participating nodes, a common operational picture will not be fully maintained.

    b) A track association or disassociation should be performed only by the "owner" of a track. (You can ensure that you own a track by confirming that the system's UID matches the first three letters of the track's UID.)

    c) A track should only be Nu-Tracked by its owner.

    d) An ambiguity should never be Nu-Tracked.